

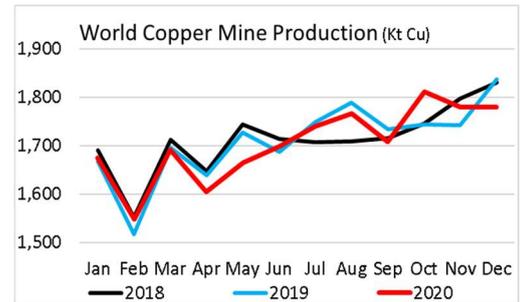


Copper: Preliminary Data for 2020

The International Copper Study Group (ICSG) released preliminary data for 2020 world copper supply and demand in its March 2021 Copper Bulletin. The Bulletin and ICSG online statistical database provide data, on a country basis, for copper mine, smelter, refined and semis production, copper refined usage, trade, stocks and prices. The bulletin is available for sale (annual subscription €550/€850 for orders originating from/outside institutions based in ICSG member countries).

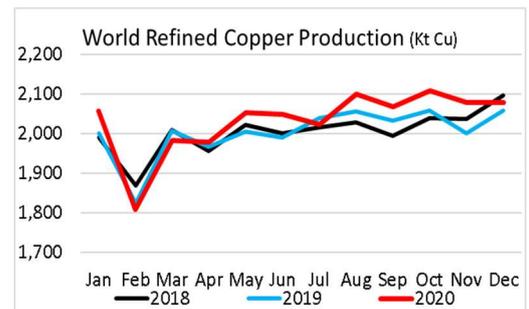
Preliminary data indicates that world copper mine production remained essentially unchanged 2020, with concentrate production increasing by 0.4% and solvent extraction-electrowinning (SX-EW) declining by about 2%:

- In 2020, a recovery in production in a few countries from constrained output in 2019 (eg Chile and Indonesia) and additional output from new projects (eg. in Panama and the D.R. Congo) helped balance the negative impact the Covid-19 pandemic had on global copper mine output.
- World mine production declined by 3.5% in April-May (y-o-y) as these two months were the most affected by the COVID-19 related global lockdown that resulted in temporary mine shutdowns/reduced production levels. However, world mine production started to recover in June as lockdown measures eased and the copper industry adapted to the stricter health protocols.
- Peruvian output was one of the most affected by stoppages resulting from the COVID-19 pandemic (mainly in April/May) and declined by 12.5% in 2020.
- COVID-19 related constraints and other operational issues also resulted in declines in production in other major copper mine producing countries, most notably Australia, Mexico and the United States.
- In Chile, the world's biggest copper mine producing country, output rose by 2.5% in the 1st half of 2020, recovering from production constraints in early 2019 (output had declined by 2.5% in 1st half 2019). For the full year, production declined by 1%.
- Production in the Democratic Republic of Congo (DRC) and Panama increased significantly mainly due to the ramp-up of new mines or expansions. In Indonesia, production grew by 39% as output levels improved following the transition of the country's major two copper mines to different ore zones in 2019.



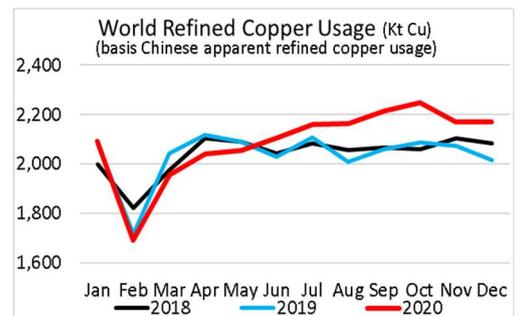
Preliminary data indicates that world refined copper production increased by about 1.5% in 2020 with primary production (electrolytic and electrowinning) up by 2.8% and secondary production (from scrap) down by 4.5%.

- Chilean electrolytic refined output increased by 25% as in the comparative period of 2019 production was negatively affected by temporary smelter shutdowns as a result of upgrades to comply with new environmental regulations. After taking into account the 7% decline in electrowinning refined production, total Chilean refined copper production (electrolytic and electrowinning) increased by 2.7%.
- Official Chinese refined production growth of about 2.5% was negatively impacted by temporary shutdowns related to COVID-19 restrictions, tight scrap supply and constraints associated with concentrate imports.
- In Africa, refined production was up by 5% in the DRC, due to the ramp-up of new or expanded SX-EW plants and by 35% in Zambia, where output recovered from smelters' operational issues and temporary shutdowns in 2019.
- Indian refined output decreased by 20% primarily as a consequence of the temporary suspension of Birla Copper's operations in March-May following a nationwide lockdown due to COVID-19. In the United States, temporary shutdowns and a long strike at Asarco's operations led to a 10% decline in refined output. Japanese refined production rose by 6% mainly as a consequence of a recovery from a number of maintenance shutdowns in 2019.
- Globally, constrained scrap supply due to the COVID-19 related lockdown and lower copper prices during the first half of the year negatively impacted world secondary refined production.



Preliminary data indicates that world apparent refined copper usage increased by 2.2% in 2020:

- The COVID-19 related global lockdown has had a notable negative impact on the world economy and subsequently on key copper end-use sectors in all regions.
- World ex-China refined copper usage was significantly impacted and is estimated to have declined by about 10%. Among the biggest copper using regions, refined usage fell by 15% in Japan, 11% in the EU, 5% in the United States and by about 10% in Asia (Ex-China).
- However, due to a 38% (1.2 million tonnes) increase in net refined copper imports, Chinese apparent usage increased by 13% offsetting usage declines in other regions of the world. Real Chinese industrial usage was negatively impacted by COVID-19 related production suspensions at semis fabricators in early 2020 and weaker external demand and should present lower growth than apparent usage.



Preliminary world refined copper balance for 2020 indicates an apparent deficit of about 560,000 t due to a strong Chinese apparent usage:

- In developing its global market balance, ICSG uses an apparent demand calculation for China that does not take into account changes in unreported stocks [State Reserve Bureau (SRB), producer, consumer, merchant/trader, bonded]. To facilitate global market analysis, however, an additional line item - Refined World Balance Adjusted for Chinese Bonded Stock Changes - is included in the attached table that adjusts the world refined copper balance based on an average estimate of changes in bonded inventories provided by two consultants with expertise in China's copper market.
- In 2020, the world refined copper balance, based on Chinese apparent usage (excluding changes in bonded stocks), indicated a deficit of about 560,000 t. The world refined copper balance adjusted for changes in Chinese bonded stocks indicated a market deficit of about 460,000 t.

(Copper Prices and Stocks and World Refined Copper Usage and Supply Trends table on next page)

Copper Prices and Stocks:

- Based on the average of estimates provided by two independent consultants, China's bonded stocks are thought to have increased by about 100,000 t in 2020 compared to the year-end 2019 level.
- As of the end of February 2021, copper stocks held at the major metal exchanges (LME, COMEX, SHFE) totalled 285,078 t, an increase of 33,903 t (+13%) from stocks held at the end of December 2020. Stocks were down at the LME (-30%) and COMEX (-10%) and up at SHFE (+97%).
- The average LME cash price for February was US\$ 8,460.25 /t, up 6% from the January average of US\$ 7,970.50 /t. The 2021 high and low copper prices through the end of February were US\$ 9,614.50 /t (on 25th Feb) and US\$ 7,755.50 /t (on 2nd Feb), respectively, and the year average was US\$ 8,215.38 /t (33% above the 2020 annual average).

Please visit the ICSG website www.icsg.org for further copper market related information.

World Refined Copper Usage and Supply Trends

Thousand metric tonnes, copper

	2017	2018	2019	2019	2020	2020			
				Jan-Dec	Sep	Oct	Nov	Dec	
World Mine Production	20,058	20,565	20,528	20,528	20,517	1,708	1,812	1,780	1,829
World Mine Capacity	24,003	24,063	24,163	24,163	24,762	2,062	2,140	2,079	2,158
Mine Capacity Utilization (%)	83.6	85.5	85.0	85.0	82.9	82.8	84.7	85.6	84.8
Primary Refined Production	19,485	20,023	20,017	20,017	20,580	1,751	1,782	1,760	1,793
Secondary Refined Production	4,063	4,035	4,028	4,028	3,839	317	326	318	318
World Refined Production (Secondary+Primary)	23,548	24,058	24,045	24,045	24,419	2,068	2,108	2,078	2,111
World Refinery Capacity	27,804	28,234	29,044	29,044	29,945	2,470	2,556	2,476	2,562
Refineries Capacity Utilization (%)	84.7	85.2	82.8	82.8	81.5	83.7	82.5	83.9	82.4
World Refined Usage 1/	23,705	24,484	24,427	24,427	24,978	2,213	2,249	2,171	2,087
World Refined Stocks End of Period	1,375	1,227	1,220	1,220	1,237	1,337	1,329	1,265	1,237
Period Stock Change	10	-148	-7	-7	17	88	-9	-64	-28
Refined Balance 2/	-157	-426	-383	-383	-559	-145	-141	-93	24
Seasonally Adjusted Refined Balance 3/				-375	-542	-103	-140	-67	-12
Refined Balance Adjusted for Chinese bonded stock change 4/	-154	-486	-561	-561	-456	-108	-74	-83	14

Due to the nature of statistical reporting, the published data should be considered as preliminary as some figures are currently based on estimates and could change.

1/ Based on Chinese and EU apparent usage.

2/ Surplus/deficit is calculated using refined production minus refined usage.

3/ Surplus/deficit is calculated using seasonally adjusted refined production minus seasonally adjusted refined usage.

4/ For details of this adjustment see the paragraph of the press release on "World refined copper balance".